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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712.962

11/13/2003

Jong-Kwon Kim

5000-1-463

9427

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7590

09/18/2006

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EXAMINER

LEUNG, CHRISTINA Y

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,962

Applicant(s)

KIM ET AL.

Examiner

Christina Y. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 is/are rejected.
7) ☒ Claim(s) 3-10 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11-03-2005.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In lines 9-14 of the claim (lines 10-15 of the page), claim 1 recites:

“...a second circulating part having first through fourth ports configured to output an optical signal, which is input to a higher-order port thereof, from a lower-order port thereof arranged adjacent to the higher-order port, *the first circulating part* being connected at the first and third ports thereof to a second optical network while being connected at the second and fourth ports thereof to the second and fourth ports of the first circulating part, respectively...” (emphasis added)

Applicants' specification does not describe how the first circulating part may be connected in the particular way currently recited in the claims. Based on Applicants' specification, Examiner respectfully notes that the claim may recite that the *second* circulating part may be recited instead of the first circulating part in the place highlighted above in the claim.

Claims 2-10 depend on claim 1 and are therefore also rejected under 35 U.S.C. 112, first paragraph for the same reason.

Double Patenting

4. Applicants are advised that should claims 3, 5, 7, and 9 be found allowable, claims 4, 6, 8, and 10 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

In this case, Examiner acknowledges that claims 3, 5, 7, and 9 appear to be slightly different from claims 4, 6, 8, and 10 respectively, because the limitations of claims 3, 5, 7, and 9 are directed to “the first circulating part” and the limitations of claims 4, 6, 8, and 10 are directed to “the second circulating part.” However, these limitations are otherwise identical in claims 3 and 4, claims 5 and 6, claims 7 and 8, and claims 9 and 10. Examiner notes that claims 3, 5, 7, and 9 and claims 4, 6, 8, and 10 are substantial duplicates because claim 1 on which they each depend recites that “a first circulating part” and “a second circulating part” are symmetrically arranged (as well as claim 1 may be understood with respect to 35 U.S.C. 112 discussed above). In other words, the claimed system features two circulating parts, either of which could be called a “first” or a “second.” Therefore, the two systems recited in claims 3 and 4 (for example) each contain an identical combination of elements that are identically arranged. The only difference would be that in one system, certain elements are labeled “first” and “second” in the context of the claim, while in the other system, these labels are reversed. Likewise, the two systems recited in claims 5 and 6, claims 7 and 8, and claims 9 and 10 respectively, are also essentially the same.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Fatehi et al. (US 6,067,389 A).

Regarding claim 1, as well as the claim may be understood with respect to 35 U.S.C. 112 discussed above, Fatehi et al. disclose an optical cross-connect device for communication between first and second optical networks communicating with each other using forward and backward optical signals each comprising a plurality of channels (Figure 1), the optical cross-connect device comprising:

a first circulating part (router portion 150, including circulator 101 and circulator 102) having first through fourth ports configured to output an optical signal which is input to a higher-order port thereof, from a lower-order port thereof arranged adjacent to the higher-order port, the first circulating part being connected at the first and third ports thereof to a first optical network (a port of circulator 101 and a port of circulator 102 are connected to a first network via fibers 106 and 107 respectively);

a second circulating part (router portion 151, including circulator 103 and circulator 104) having first through fourth ports configured to output an optical signal, which is input to a higher-order port thereof, from a lower-order port thereof arranged adjacent to the higher-order port, the second circulating part being connected at the first and third ports thereof to a second

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optical network (a port of circulator 101 and a port of circulator 102 are connected to a second network via fibers 108 and 109 respectively); while being connected at the second and fourth ports thereof to the second and fourth ports of the first circulating part, respectively (Figure 1 shows how router portions 150 and 151 are connected by “second” and “fourth” ports of each router portion; column 3, lines 3-67; column 4, lines 1-19);

a first reflecting part connected to respective second ports of the first and second circulating parts (such as fiber gratings 105A connected between circulators 101 and 103 of router portions 150 and 151), and adapted to selectively (1) reflect each channel of a forward optical signal input thereto; and (2) allow the channel to pass therethrough (column 4, lines 20-67; column 5, lines 1-21); and

a second reflecting part connected to respective fourth ports of the first and second circulating parts (such as fiber gratings 105B connected between circulators 102 and 104 of router portions 150 and 151), and adapted to selectively (1) reflect each channel of a backward optical signal input thereto; and (2) allow the channel to pass therethrough (column 4, lines 20-67; column 5, lines 1-21).

Regarding claim 2, Fatehi et al. disclose that each of the first and second reflecting parts comprises a plurality of fiber Bragg gratings (FBG), each of which being adapted to allow an optical signal input thereto to pass through or reflect only a predetermined channel of the optical signal in accordance with an ON or OFF state thereof (column 4, lines 20-67; column 5, lines 1-21).

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Allowable Subject Matter

7. Claims 3-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art, including Fatehi et al., does not specifically disclose or fairly suggest an optical cross-connect device including the combination of elements and limitations recited in claims 3-10 (and including the limitations of parent claim 1), particularly wherein the first or second circulating parts each include first, second, third, and/or fourth circulators connected to other elements in the way specifically recited in the claims. Regarding claims 3 and 4 in particular, Examiner notes that Fatehi et al. generally disclose that each of a “first” and “second” circulating parts contain a first and second circulators having a plurality of ports (Figure 1), but Fatehi et al. do not specifically further disclose first and second circulators connected to each other in a double-port-connected configuration as recited in the claims.

Examiner again respectfully notes that should claims 3, 5, 7, and 9 be found allowable, claims 4, 6, 8, and 10 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof as discussed above.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023. The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CHRISTINA LEUNG
PRIMARY EXAMINER